
Philodendron Subgenus *Pteromischum* (Araceae) from Saül, French Guiana

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ABSTRACT. This paper treats the six species of *Philodendron* subg. *Pteromischum* from Saül, a region of mostly virgin humid forest located in central French Guiana. Descriptions, dichotomous keys, discussion, and exsiccatae are provided. Three species, *P. cremersii*, *P. duckei*, and *P. guianense*, are new.

Work toward the completion of the Araceae treatment for the Flora of Saül has resulted in the resolution of several unidentified species of *Philodendron* subg. *Pteromischum* from the Guianas. This

treatment is to appear in a work currently in preparation by Scott Mori et al. entitled *Flora of the Central French Guiana: A Manual of the Vascular Plant Families of Lowland Moist Forest in Northeastern South America*, to be published by the New York Botanical Garden. The publication schedule of that treatment demands the publication of several novelties at this time. Because subgenus *Pteromischum* is very rich and confusing in the Guiana region, and the Flora of Saül treatment does not allow detailed descriptions, the publication of detailed descriptions for all the species in the Saül region is warranted.

KEY TO SPECIES OF SAÜLIAN *PHILODENDRON* SUBG. *PTEROMISCHUM*

- 1a. Leaf blades lacking any obvious primary lateral veins; entire spathe abscissing immediately after anthesis *P. surinamense* (Miquel) Engler
- 1b. Leaf blades with obvious primary lateral veins (at least near the base); spathe persisting after anthesis (at least until maturity of fruits).
 - 2a. Leaf blades more than 30 cm long and usually more than 13 cm wide (more than 6.5 cm wide in juveniles); spathe 14–17 cm long *P. cremersii* Croat & Grayum
 - 2b. Leaf blades less than 23 cm long and usually less than 12 cm wide; spathe 6–12.5 cm long.
 - 3a. Petiole sheath ending somewhat below the base of the blade *P. guianense* Croat & Grayum
 - 3b. Petiole sheath ending at base of blade.
 - 4a. Petioles so narrowly winged as to almost appear unwinged, the wing erect or involute, 3–4 mm wide when flattened; blades dark green and velvety above; stems distinctly scaly-puberulent or scaberulous *P. duckei* Croat & Grayum
 - 4b. Petioles conspicuously winged, the wing spreading, 9–10 mm wide; blades medium green and semiglossy to glossy above; stems smooth or at most minutely granular-puberulent at 30× magnification.
 - 5a. Blades glossy on lower surface; plants nearly always growing up tree trunks in a spiral fashion, usually producing 2–3 spirals before branching and flowering; spadix slender *P. placidum* Schott
 - 5b. Blades matte on lower surface; plants usually growing straight up the side of tree trunks before branching and flowering; spadix stout *P. rudgeanum* Schott

Philodendron cremersii Croat & Grayum, sp. nov. TYPE: French Guiana. Montagnes de Kaw, along road to Montagne Favard, in vicinity of junction to Fourgrassie, 04°38'N, 52°17'W, 200 m, Croat 74336 (holotype, M0-4343662; isotypes, B, CAY, F, K, MG, NY, P, US, VEN). Figures 1, 2.

Planta hemiepiphytica; internodia 1–9(17) cm longa; petiolus (6)13–27 cm longus, vaginatus usque 1.2–1.7 cm infra laminam; vagina erecta; lamina plus minusve

elliptica, 30–50.5 cm longa, 9–20 cm lata, nervis primariis lateralibus ca. 20 utroque; pedunculus usque 3 cm longus; spatha 14–17 cm longa; spadix 11–16.5 cm longus; parte pistillata usque 5 cm longa.

Hemiepiphyte, on tree trunks near the ground. Stems sometimes trailing when preadult, appressed-climbing when adult. Internodes 1–9(17) cm long, (0.5)1–1.5 cm diam., dark green to bluish green, matte to weakly glossy, flattened on one side, drying light yellow-brown to medium reddish brown, drying



Figures 1, 2. *Philodendron cremersii* Croat & Grayum, Croat 74336. —1. Habit. —2. Flowering plant showing erect-incurled sheath and short-pedunculate inflorescence.

narrowly ridged (sometimes irregularly so on juveniles). Petioles to 27 cm long, sheathed to within 1.2–1.7 cm of the base of the blade on adult plants (to beyond the base of the blade on juveniles); sheath narrow (the sides ca. 5 mm high), to 10 mm or more wide when flattened, erect-incurled, overlapping at base, erect and incurled toward apex, emarginate and free-ending at apex, dark green and matte, the surface drying finely striate. Blades somewhat inequilateral, one side 0.5–4.3 cm narrower, \pm elliptic, rarely narrowly oblanceolate, 6.5–21 cm long, 6.5–13 cm wide when young, usually narrowly oblanceolate, 30–50.5 cm long, 9–20 cm wide, ca. 3 times longer than wide (rarely as little as 1.8 times longer than wide), acuminate at apex, equilateral or only slightly inequilateral and acute to narrowly rounded at base, subcoriaceous, dark green and subvelvety matte when young, becoming weakly glossy when mature, moderately paler and semiglossy below (matte when juvenile), becoming semiglossy, usually drying dark brown above, lighter brown below; margins broadly undulate; midrib obtusely sunken and concolorous to slightly paler above, narrowly raised below (sometimes convex on juveniles) and paler below. Primary lateral veins to ca. 20 per side on adults (5–9 on juveniles), arising at

55–80° angle (45–55° on juveniles), weakly arcuate, weakly quilted-sunken above, weakly raised to convex and paler below, sometimes weakly pleated, drying darker than surface below. Minor veins sparse, moderately distinct below, drying weakly raised and somewhat undulate with rather prominent oblique cross veins. Inflorescences 1–2 per axil. Peduncle to 3 cm long, largely hidden by the spathe. Spathe 14–17 cm long, slightly constricted above the tube. Spathe tube medium green outside, blade pale green to whitish, the entire inner surface greenish white. Spadix 11–16.5 cm long; female portion of spadix pale green, to 5 cm long in front, 4.7 cm long in back, to 2 cm diam. midway, 1.8 cm diam. at apex, 1.7 cm diam. at base.

Philodendron cremersii is apparently endemic to French Guiana, known principally from the Montagnes de Kaw at 100–250 m. It is common along the road to Montagne Trésor east of Cayenne. It is also known from a single collection along the road between Cayenne and Regina.

The species is recognized by its very large, dark brown-drying leaf blades, erect petiole sheath extending nearly to the apex, yellowish brown-drying stem, and the semiglossy upper blade surfaces. It is

named in honor of Georges Cremers, a long-time researcher at ORSTOM in French Guiana. He has made many excellent collections of Araceae, including the first collection of this species.

Plants believed to represent *P. cremersii* are also relatively common around Eaux Claires near Saül in central French Guiana, but were seen only in sterile and probably juvenile condition on the lower trunks of trees in the forest understory. The Saül material (Croat 74165 and 74234) differs in having blades that are subvelvety above and matte below (drying gray-green above, slightly yellow-green below, with the epidermal cells sunken on both surfaces), in contrast to weakly glossy for the fertile collections seen in the Montagnes de Kaw. It is likely that these differences are merely due to age.

Philodendron cremersii is similar to *P. macropodum* K. Krause described from Brazil (Roraima: Serra de Mairary at 1,000 m). That species also has a petiole sheath that ends somewhat below the blade, but it has smaller leaves which are more nearly elliptic and dry gray-brown above and reddish brown below. In addition, they are broadly rounded at the base (vs. narrowly rounded to acute for *P. cremersii*).

Philodendron cremersii is easily confused with another incompletely known but apparently new species from French Guiana and Surinam. That species has blades that are typically more ovate, averaging about twice as long as broad (vs. an average of 2.5 times longer than broad in *P. cremersii*). It also differs in having blades that are matte when fresh (also expressed in larger epidermal cells on the upper surface of the blade), which dry yellowish brown rather than dark brown and lack the oblique cross veins common to *P. cremersii*. The species is represented by material from Ile de Cayenne (Oldeman 1117), Montagnes de Kaw (Billiet & Jadin 1986, Cremers & Feuillet 1970, Croat 74254), and along the St. Elie track (Croat 53849). It is probably also represented in Surinam at Brownsberg Park (Croat 53902).

Paratypes. FRENCH GUIANA. Montagnes de Kaw, 100 m, Cremers 9828 (B, CAY, K, NY, P, U, US); Montagnes de Kaw, caves of Kaw, along road to Montagne Trésor, ca. 10 km E of Camp Caïmans, 4°34'N, 52°10'W, 100 m, Croat 74270 (CAY, MO); along road to Montagne Trésor, caves of Kaw, ca. 10 km E of Camp Caïman, 5 km N of road, 100 m, 4°34'5"N, 52°10'00"W, Croat 74254 (CAY, MO); Montagnes de Kaw, N slope, 2–3 km N of Camp Caïman, 100 m, de Granville 6700 (CAY); Montagnes de Kaw, along road to Montagne Favard, vic. jct. to Fourgrassie, 4°38'N, 52°17'W, 200 m, Croat 74336 (B, CAY, F, K, MG, MO, NY, P, US, VEN); Cayenne–Regina, km 93, 100–150 m, Croat 74322 (MO).

***Philodendron duckei* Croat & Grayum, sp. nov.**

TYPE: French Guiana. Mt. Galbao, south sector, 570 m, 3°35'N, 53°18'W, de Granville et al. 8894 (holotype, US; isotypes, CAY, K, NY, P). Figures 3, 4.

Planta hemiepiphytica; internodia 1–5(8) cm longa, 3.5 mm diam.; petiolus 3–7 cm longus, omnino vaginatus; lamina oblongo-elliptica, 6.5–21 cm longa, supra hebetata, subvelutinave; nervis primariis lateralibus 9–13 utroque; inflorescentia solitaria; pedunculus 1.5–2 cm longus; spatha 7–8 cm longa; spadix 6.5–8 cm longus, parte feminina 2.2 cm longa.

Terrestrial or hemiepiphytic near the ground. Internodes purplish to brownish, semiglossy, terete, 1–5(8) cm long, 3–5 mm diam., drying dark brown, sharply ribbed, densely and minutely scaly-scaberulous (sometimes smooth in age; merely scaberulous in material from Saül). Petioles 3–7 cm long, sheathed throughout, the sheath matte, erect and incurled, 3–4 mm wide when flattened, closely striate, the striae and lower part of lower midrib often densely scaberulous, sheath apex rounded and slightly overlapping base of blade. Blades slightly inequilateral, one side 7–11 mm narrower, oblong-elliptic, 6.5–21 cm long, 2.5–7 cm wide, gradually acuminate at apex, acute to narrowly rounded or weakly cordulate at base, thin, dark green, matte and subvelvety above, slightly paler and matte below, drying grayish to olive-green above, yellowish gray-green to yellowish brown below. Major veins sunken above, slightly paler and matte below; major veins raised below. Midrib and primary lateral veins sunken above; midrib prominently raised and slightly paler below, drying brownish; primary lateral veins 9–13 pairs, arising at 50–60° angle, weakly arcuate to margin, ± pleated-raised below, drying slightly paler than the surface. Minor veins fine, distinct. Inflorescence 1 per axil. Peduncle 1.5–2 cm long, less than 3 mm diam. when dried. Spathe 7–8 cm long, 7–15 mm diam., weakly constricted just above the tube, the tube 1.5–1.7 cm diam. Spadix 6.5–8 cm long, the pistillate part 2.2 cm long, 6 mm diam.; staminate portion to 3.2 cm long, < 3 mm diam. on drying throughout. Infructescence 2.5–3.5 cm long, drying 10–15 cm diam.

The species ranges from French Guiana to northeastern Brazil (Amapá and Pará) to as far south as 4°11'S, at elevations of 60 to 580 m. It is characterized by its thin, subelliptic, dark green blades subvelvety on the upper surface and the slender, fully winged petiole. It was first collected in French Guiana by Joseph Martin. It is named in honor of Adolfo Ducke, who made important collections in the Amazon basin between 1912 and 1947. He was



the first to have collected this species in Brazil (19 November 1910).

Paratypes. BRAZIL. **Amapá:** Município Oiapoque, 121 km SSE of Oiapoque on BR 156, near edge of Reserva Indígena Uaçá, ca. 3°00'N, 51°30'W, *Daly & Souza 3830* (NY). **Pará:** BR 422, 70 km SSW of Tucuruí, 4°11'S, 49°44'W, *Daly et al. 1494* (MG, MO); Rio Tocantins, Igarapé Cametaú, entrance Itupiranga, 4°09'S, 49°17'W, *Daly et al. 1562* (MG); Santarém, km 61 along road to the Palhão waterfalls, on Rio Curuá, Rio Guminá-Mirim, Castenhal das Piedras, *Ducke 11471* (MG). FRENCH GUIANA. Locality unknown: *Martin s.n.* (K, mistakenly labeled type of *P. guttiferum* var. *rudgeanum*); Approuague river basin—Arataye, 4°3'N, 52°42'W, 90 m, *Larpin 803* (CAY, MO); Camopi River (tributary of Oyapock), 2 km from Crique Tamouri, *Oldeman 143* (CAY, P); Camopi River, Saut Ouasseye, *Oldeman 2603* (CAY, P); Gobaya Soula—Maroni River basin—trail to Atachi-Bacca, l'Itany River, *de Granville 10392* (CAY); Mont Galbao, 570 m, 3°35'N, 53°18'W, *de Granville et al. 8894* (CAY, US); Ile de Cayenne, Mont Grand Matoury, 50 m, *Cremers 1993* (CAY, MO); Oyapock River, 2 km from Camopi, *Oldeman 2732* (CAY, P), *2737* (CAY, P); Montagne Bellevue de l'Inini, 700 m, *de Granville 7981* (CAY); Région de Paul Isnard, Massif du Décou, 580 m, *Feuillet 389* (CAY, K); Saut Pararé, Arataye River, affluent of Approuague River, 7 km SW of Regina, *Villiers 2720* (CAY); Saül, *Riera 947* (CAY); Saül, ORSTOM trail, Boef Mort trail, p.k. 1,200, *de Granville 894* (CAY, P, US); Saül, vic. Eaux Claires, *Croat 74142* (CAY, MO), *74185* (CAY, MO); Yaroupi River, Saut Polissoirs, *Oldeman 3062* (CAY); Yaroupi River, 6 km from Saut Taïnoua, *de Granville 395* (CAY). SURINAM. Massau Mts., Marowijne River, 400–520 m, *Cowan & Lindeman 39024* (NY).

Philodendron guianense Croat & Grayum, sp. nov. TYPE: Surinam. Emmaketen Mountains, south track, ca. 1 km S of division point, cloud forest, 825 m, *Daniëls & Jonker 1061* (holotype, NY; isotypes, K, U). Figures 5, 6.

Planta hemiepiphytica; internodia 2–6 cm longa, 3–5 mm diam.; petiolus 6.5–10.5 cm longus; vagina terminans 6–15 cm infra laminam; lamina oblonga-elliptica vel anguste obovata, 9–21 cm longa, 3–7.5 cm lata; nervis primariis lateralibus 3–5(7) utroque; pedunculus 2.5–3 cm longus; spatha 6–8 cm longa, non constricta supra tubum, viridis vel flavum omnino; spadix 5–7.5 cm longus, parte pistillata 2–3.7 cm longa.

Hemiepiphytic vine. Internodes 2–6 cm long, 3–5 mm diam., dark green to olive-green or grayish, turning light brown, semiglossy, weakly flattened on one side, drying light yellow-brown to dark brown. Petioles 6.5–10.5 cm long, medium green and weakly glossy, darker along the margins, sheathed from

$\frac{2}{3}$ its length to nearly throughout but ending 6–15 mm below the blade, sometimes to the base of the geniculum, narrow, erect and incurled, the margins touching toward the base, typically less than 5 mm high, to ca. 8 mm wide when flattened (to 1 cm wide when subtending inflorescence), narrowly rounded at the apex, the free portion of the petiole and the geniculum sharply sulcate. Blades thinly coriaceous, slightly to moderately inequilateral, oblong-elliptic to narrowly obovate, 9–21 cm long, 3–7.5 cm wide, gradually to abruptly acuminate at apex, slightly inequilateral and acute at base, subcoriaceous, dark green and weakly subvelvety matte to weakly glossy above, slightly to moderately paler and matte below, drying gray-green above, yellow-green below. Midrib deeply sunken and concolorous above, narrowly convex and slightly paler below. Primary lateral veins 3–5(7), weakly visible and weakly sunken above, flat and weakly pleated-raised below, scarcely more visible than minor veins (only slightly wider at times), arising at 45–50° angle, drying paler than surface, sometimes weakly undulate, gradually arcuate to margins. Minor veins visible but usually weak and thin. Inflorescence solitary. Peduncle slender, mostly exposed, 2.5–3 cm long, drying less than 3 mm diam., reddish brown. Spathe 6–8 cm long, 1–2 cm diam., not at all constricted above the tube, solid green to yellowish, slightly paler within, drying reddish brown. Spadix 5–7.5 cm long. Pistillate portion 2–3.7 cm long, 8–10 mm diam. Staminate portion weakly protruded forward, slender, with a small portion remaining exposed on drying.

Philodendron guianense ranges from Guyana (doubtless Venezuela as well since it has been collected very near the Venezuelan border (*Stergios et al. 3371*)) to Surinam, French Guiana, and Brazil (Amapá at 2°12'N), 100–900 m elevation.

Steyermark 87586 from Venezuela (Delta Amacuro, Río Cuyubini, Cerro La Paloma in the Sierra Imataca at 100–200 m) is perhaps also this species. However, it differs in having the petioles sheathed all the way to the geniculum.

The species is characterized by its usually oblong-elliptic, frequently subvelvety matte blades, petiole sheath ending somewhat below the leaf blade, and inflorescence with a small apical portion remaining exposed after drying. The name of the species reflects its primarily Guianan distribution.

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Figures 3–6. 3, 4 *Philodendron duckei* Croat & Grayum, *Croat 74142*. —3. Habit. —4. Showing narrowly sheathed petiole and matte blade. 5, 6. *P. guianense* Croat & Grayum, *Croat 74235*. —5. Habit, growing over large rock. —6. Habit, growing over ground.

Some collections (*Grenand 1626* (CAY) collected at Oyapock: Anse Bruyère and *Daniëls 48* (CAY) collected at Grand Santi) were collected on opposite sides of French Guiana. They are tentatively placed here but perhaps represent another species. They differ in having narrower blades that dry dark brown and have primary lateral veins departing the midrib at ca. 25° angle.

Paratypes. BRAZIL. **Amapá:** Rio Oiapoque, near Cachoeira Tres Saltos, 2°12'N, 52°53'W, *Irwin, Pires & Westra 48137* (NY). FRENCH GUIANA. Without locality, *Moricand s.n.* (G); Maroni–Camp Charveiu, *Lemée s.n.* (P); road to St. Elie, CD-21, km 15.7, 5°00'N, 53°10'W, *Hahn 3696* (US); road to Kaw, km 34, 340 m, *Billiet & Jadin 4593* (BR); Régina–St. Georges D.Z. 5–km 43–Ba River basin, *Cremers 1991* (CAY); Rte. RN 2, p.k. 53, Crique Boulanger, *Billiet & Jadin 4464* (BR); Saül, vic. Eaux Claires, 230 m, *Croat 74174, 74195, 74235* (CAY, K, MO); 2 km S of Saül, track Limonade, 3°32'N, 53°12'W, 180–210 m, *Ek & Montfoort 4* (CAY). SURINAM. Emmaketen, E slope of Gonggrijptop, 900 m, *Daniëls & Jonker 932* (U); Emmaketen, south track, 825 m, *Jonker-Verhoef & Jonker 1061* (K, NY, U); road to Petit Saut, *Sauvain 654* (CAY). GUYANA. Bartica–Potaro Road, 14–15 km, *Sandwith 1154* (K); Akarabisi, a few meters from the Venezuelan border, 6°57'N, 60°22'W (MO, PORT); Upper Rupununi River, near Dadanawa, 2°45'N, *La Cruz 1521* (NY).

Philodendron placidum Schott, Bonplandia 7: 164. 1859. *Philodendron guttiferum* Kunth var. *placidum* (Schott) Engler in Martius, Fl. Bras. 3(2): 149. 1878. TYPE: French Guiana. Cayenne: *Martin s.n.* (holotype, G-DC). Figures 7, 8.

Hemiepiphytic appressed climber spiraling around the tree trunk several times below ca. 5 m, where it branches and spreads before flowering. Internodes 3–5 cm long (to 16 cm on younger stems), 4–6 mm diam., matte, dark green, becoming gray, sharply flattened on one side, drying pale yellow-brown with close, slender ridges, smooth but obscurely and densely granular-puberulent at 30×. Petioles 6.5–11 cm long, sheathed throughout, the sheath 9–15 mm wide, glossy, spreading, truncate to emarginate at apex, drying reddish brown. Blades 12–31 cm long, 5–12.7 cm wide, oblong-elliptic or rarely elliptic, markedly inequilateral (one side 1.5–2.7 cm narrower), abruptly acuminate at apex, narrowly and inequilaterally rounded at base, subcoriaceous, glossy on both surfaces, moderately bicolorous, drying grayish above, yellowish brown beneath. Midrib weakly sunken above, convex below, often drying undulate. Primary lateral veins 7–10, weakly sunken above, weakly raised below, drying paler than surface, arising at ca. 30° angle on the narrow side, at ca. 45° on the broader side, weakly arcuate to

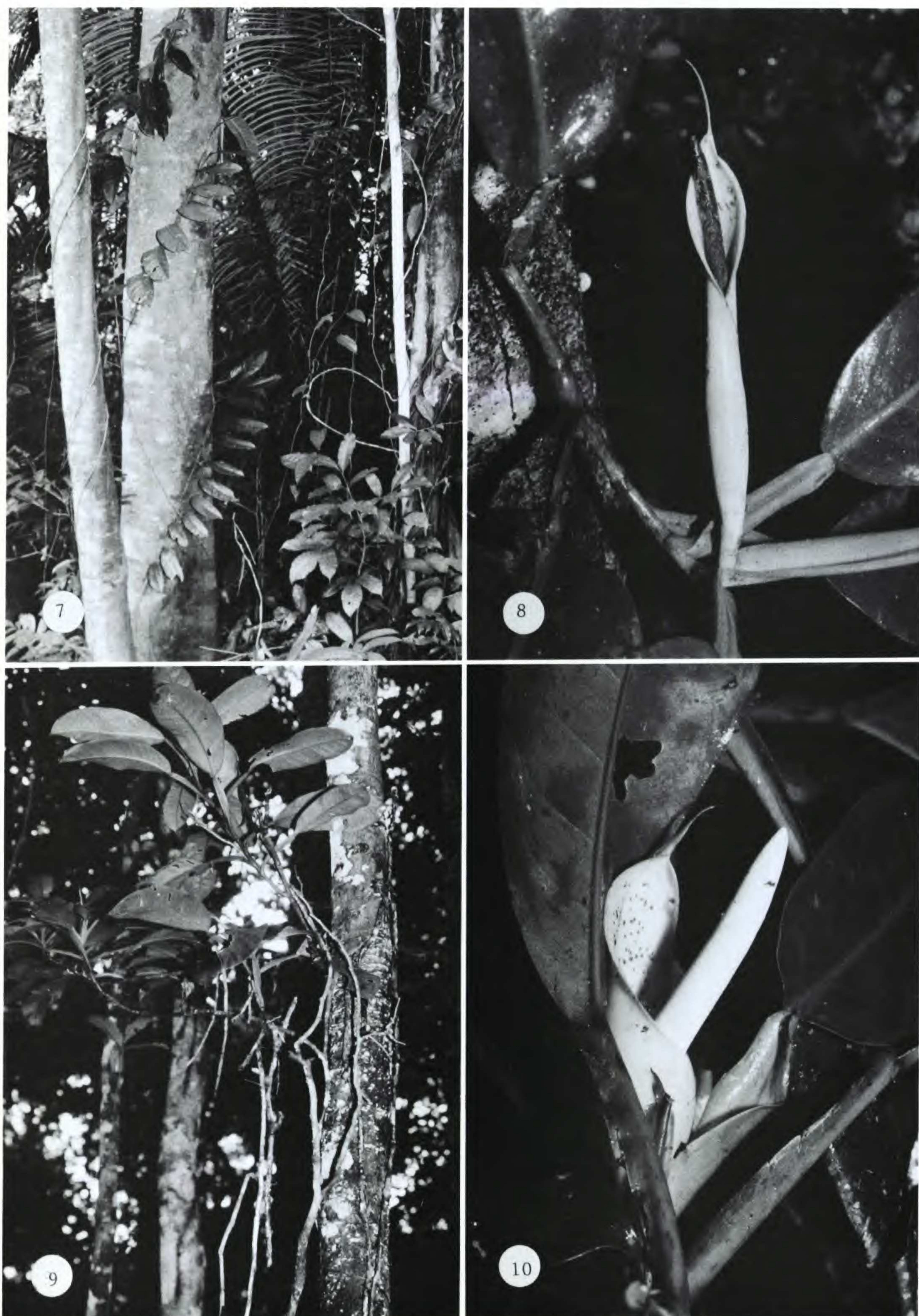
the margin. Minor veins drying moderately distinct below. Inflorescence 1 per axil. Peduncle 1–2 cm long, drying 4–6 mm diam. Spathe 9.5–12.5 cm long, barely constricted above the tube, the tube pale green, the blade white, caudate-acuminate at apex (the acumen to 2 cm long), with reddish brown resin droplets on inner surface, becoming greenish throughout after anthesis, with the upper 3 cm of the spadix remaining open after anthesis and with the post-anthesis spadix remaining exerted 1–2.5 cm, the entire spathe drying reddish brown after anthesis. Spadix 9.5–11.5 cm long, the staminate portion narrowly long-tapered, to 6 mm diam.

Philodendron placidum is apparently widespread in French Guiana, has been collected near the Surinam border at Crique Grégoire, and is to be expected in Surinam. This species is abundant everywhere in the vicinity of Eaux Claires near Saül in south-central French Guiana.

The species is recognized by its spirally climbing growth habit, its fully sheathed petioles, blades glossy on both surfaces, and by its stubby inflorescence with the spadix remaining slightly exerted after anthesis. It is very easily confused with *P. rudgeanum* Schott, which differs in climbing directly up the side of the tree, and in having blades that are matte rather than glossy on the lower blade surfaces, a slender spadix, and in generally flowering ahead of *P. placidum*. It was rarely at anthesis during mid-February, whereas many plants of *P. placidum* were in flower.

Though there are a number of older collections of this species from the Guianas, the name has long been applied only to a Schott drawing (2413) and the holotype in Geneva, which may not be borrowed. However, careful studies of the drawings as well as photographs of the type specimen strongly suggest that it represents the material here described. Schott's drawing of the spathe shows it to be subelliptic and open at anthesis with the male portion of the spadix somewhat protruding forward. While the inflorescence at anthesis has not been seen at Saül, the proportions of the respective spadix portions agree with the Schott drawings.

Specimens seen. FRENCH GUIANA. Without locality: without collector (G); Crique Grégoire, ORSTOM Hydrological Station, *Deward 15* (CAY); Saül, 3°37'N, 53°12'W, 200–400 m, *Mori & Pipoly 15599* (CAY); Saül, trail between Mont Galbao trail and Crique Limonade Trail, 200 m, 3°37'N, 53°12'W, *Mori et al. 20827* (CAY); Saül, vic. Eaux Claires, 240 m, *Croat 74136* (B, CAY, F, K, MG, MO, NY, P, US, VEN), *74192* (CM, MO); Saül, Monts la Fumée, 3°37'N, 53°12'W, *Mori & Boom 15331* (CAY); Saut Mapaou–Approuague River basin, 4°12'N, 52°18'W, *Cremers 13026* (CAY, MO); Trois



Figures 7–10. 7, 8. *Philodendron placidum* Schott, Croat 74136. —7. Habit, showing spiral growth up a tree. —8. Close-up showing post-anthesis inflorescence with a portion of the spadix remaining exerted. 9, 10. *Philodendron rudgianum* Schott, Croat 74130. —9. Habit, showing plant growing straight up the side of the tree. —10. Close-up showing short-pedunculate inflorescence at anthesis.



Figures 11, 12. *Philodendron surinamense* (Miquel) Engler, Croat 74189. — 11. Habit. — 12. Leaf blade showing lack of prominent primary lateral veins.

Sauts—road between Zidok and Capitaine Roger, *Lescure* 554 (CAY); Saut Koumaou Soula, S of Tampoc, *Cremers* 4458 (CAY).

Philodendron rudgeanum Schott, Syn. Aroid. 78. 1856. *Philodendron guttiferum* Kunth var.

rudgeanum (Schott) A. Jonker & Jonker in Pulle & Lanjouw, Fl. Suriname 1(2): 73. 1953. TYPE: t. 33 in Rudge, Pl. Guian. 1(4). 1805 (holotype). Figures 9, 10.

Pothos canniifolius Rudge [as “*cannaefolia*”], Pl. Guian. 1(4): 23, t. 33. 1805., nom. illeg., non Dryander

ex Sims (1802). *Monstera cannifolia* ["cannaefolia"] Schott, Wiener Z. Kunst 127(4): 1028. 1830. *Philodendron cannifolium* (Schott) Engler, Bot. Jahrb. 26: 512. 1899, nom. illeg., nec (Dryander ex Sims) G. Don (1839) non Martius ex Kunth (1841). TYPE: t. 33 in Rudge, Pl. Guian. 1(4), 1805 (holotype).

Loosely climbing hemiepiphyte, usually climbing straight up the side of the trunk to ca. 4 m before branching and flowering. Internodes 5–20 mm long, 5–7 mm diam., weakly glossy, olive-green, drying yellow-brown to dark brown, irregularly and acutely striate, smooth. Petioles 5–10 cm long, sheathed throughout, the sheath spreading, to 1 cm wide, semiglossy except \pm matte on the abaxial surface, drying finely striate on abaxial surface. Blades moderately inequilateral (one side ca. 1 cm narrower), narrowly elliptic to oblong-elliptic, broadest at the middle or slightly above the middle, 11–23 cm long, 4.3–9.7 cm wide, obtuse to rounded and abruptly acuminate at apex, acute to cuneate and abruptly ending at base, thinly coriaceous, moderately glossy above, moderately paler and matte below. Midrib narrowly sunken above, thicker than broad below, drying weakly and obtusely raised below. Primary lateral veins 8–12 pairs, arising at 55–65° angle, obtusely sunken above, weakly pleated-raised below, drying flat and obscure above, weakly raised below. Minor veins moderately distinct below, sometimes weakly undulate. Inflorescences one per axil. Peduncle 1–2.2 cm long, 3 mm diam., mostly obscured by the sheath. Spathe 8.5–10.5 cm long, barely constricted above the tube, narrowly cuspidate-acuminate at apex, pale green and semiglossy on both surfaces at anthesis, paler within, the tube 1.3–2 cm diam. Spadix 8.7–11 cm long, weakly exerted forward at anthesis, with 1–3 cm of the male spadix remaining exerted beyond the end of the spadix after anthesis. Pistillate portion 3.7–4.3 cm long, 8–9 mm diam., slightly narrower than the sterile staminate portion at anthesis, becoming broader soon after anthesis. Staminate portion moderately stubby, 5.3 cm long, ca. 1 cm diam., obtuse at apex. Sterile staminate portion barely discernible from the fertile portion. Abundant in most areas of the forest on the lower trunks of moderately large trees.

Philodendron rudgeanum ranges from Trinidad and northeastern Venezuela through the Guianas to northeastern Brazil (Amapá and Belém), then disjunctly to Bahía.

This species is distinguished from *Philodendron placidum* by having the blades matte on the lower surface and by its growth habit, which consists of a non-spiralling stem. It is most easily confused with *P. placidum*, which differs in having blades glossy

on the lower surfaces and by climbing spirally up trees. In addition, *Philodendron placidum* flowers later than *P. rudgeanum*, which was only rarely in flower in mid-February when *P. placidum* was in full flower.

Philodendron surinamense (Miquel) Engler in Martius, Fl. Bras. 3(2): 133. 1878. *Elopium surinamense* (Miquel) Schott, Oesterr. Bot. Zeit. 15: 35. 1865. *Anthurium surinamense* Miquel, Natuurk. Verh. Holl. Maatsch. Haarlem, ser. 2, 7: 211. 1851. TYPE: Suriname. *Hostmann & Kappler* 683a (holotype, U; isotype, S). Figures 11, 12.

Philodendron riedelianum Schott, Oesterr. Bot. Zeit. 9: 98. 1859. TYPE: Brazil. Bahía: Ilheus, *Riedel* 752 (holotype, LE 2 sheets).

Hemiepiphytic vine. Internodes terete to subtrigonous, 1.5–11 cm long, 5–7 mm diam., green, soon turning light brown. Petioles 2.5–12 cm long, sheathed throughout, the sheath erect-incurled, medium green, weakly glossy, free-rounded and narrowly rounded at apex, to 1.2 cm wide when expanded. Blades oblong-elliptic, 12–34 cm long, 3–10 cm wide, acuminate or sometimes cuspidate at apex, acute to rounded at base, subcoriaceous, semiglossy, slightly bicolorous, drying gray-green above, yellow-green below. Midrib deeply sunken above, convex below. Primary lateral veins flat and barely apparent above, flat and darker than surface below, little or not at all more apparent than the minor veins below. Inflorescence 1 per axil. Peduncle 3.5 cm long. Spathe green, 11–15 cm long, narrowly acuminate at apex, deciduous promptly after anthesis. Spadix 7–9.5 cm long. Pistillate portion 3–4.3 cm long, 8–10 mm diam.

Philodendron surinamense ranges from southern Venezuela (Bolívar and Amazonas) and the Guianas to Ecuador (Pastaza), Peru (Loreto), and Brazil (Amapá, Roraima, Amazonas, Maranhão, and Bahía).

The species is recognized by its lack of primary lateral veins on the blade and its prompt loss of the spathe after anthesis. It is not easily confused with any other member of subgenus *Pteromischum*.

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